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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/038,176	10/24/2001	Eric K. Hall	907B.0008.U1(US)	7823
29683	7590	11/01/2005	EXAMINER	
HARRINGTON & SMITH, LLP 4 RESEARCH DRIVE SHELTON, CT 06484-6212			WILSON, ROBERT W	
			ART UNIT	PAPER NUMBER
			2661	

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/038,176

Applicant(s)

HALL ET AL.

Examiner

Robert W. Wilson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2 and 4-12 is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Warren (WO 98/45960)

Referring to claim 1, Warren teaches: A receiver for receiving spread spectrum or CDMA in a jamming environment per Fig 1. The first signal is received utilizing a first spreading code M and a second signal is received using a second spreading code M. M is greater than N per Fig 1 and per Pg 4 line 9-Pg 5 line 19. It is within the level of one skilled in the art implement a transmitter which performs the inverse function of the receiver in order for this invention to work. The data rate  $R_b$  can be adjusted based upon processing gain required to compensate for the jamming per Pg 3 line 1-32. Warren does not expressly call for: the first signal with more codes to utilize more bandwidth than the second signal with fewer codes.

It is well known in the art that the number of codes is proportional to the rate.

It would have been obvious to one of ordinary skill in the art at the time of the invention to adjust data rate or signal bandwidth for the first and second signal based upon the processing gain need to overcome the jamming such that the signal bandwidth for the first signal with more codes is greater than the signal bandwidth for the second signal with fewer codes.

***Claim Objections***

3. Claim 3 is objected to because of the following informalities: The examiner objects to the wording “at least one or row or column permutation”. The examiner recommends “at least one row or column”. Appropriate correction is required.

***Allowable Subject Matter***

4. The present invention is directed to determining the output bandwidth of signals which are generated by utilizing a spreading code which is in a matrix based upon the input rate or bandwidth.

The closest prior art is Warren (WO 98/45960). Bruce teaches that there is a relationship between the output bandwidth of signals based upon utilizing a spreading code.

The closest prior art, Bruce (WO 98/45960) does not either singularly or in combination anticipate or render the following claim limitation obvious:

“generating a  $P' \times P'$  Hadmamard spreading code set where  $P'=P/N$ , where  $P$  is the spreading gain in chips/symbol and where  $N$  is an integer multiple of 2, and  $P' \times P'$  Hadamard spreading code set requiring a channel bandwidth of  $X$  Hz for operation; and replicating chips in each spreading code by  $N$  to produce  $P' \times P$  spreading code set” as claimed in claim 2.

“generating a  $P' \times P'$  Hadmamard spreading code set where  $P'=P/N$ , where  $P$  is the spreading gain in chips/symbol and where  $N$  is an integer multiple of 2, and  $P' \times P'$  Hadamard spreading code set requiring a channel bandwidth of  $X$  Hz for operation; and replicaing chips in each

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spreading code by N to produce  $P' \times P'$  Hadamard spreading code set that requires a channel bandwidth of Y Hz for operation, where  $Y < X$  as claimed in claims 6 & 10 respectively.

In Addition:

Claims 4-5 are allowable because they depend upon claim 2.

Claims 7-9 are allowable teaches they depend upon claim 6.

Claims 11-12 are allowable teaches they depend upon claim 10.

### *Conclusion*

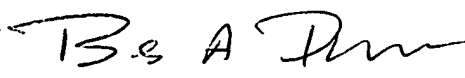
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W. Wilson whose telephone number is 571/272-3075. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on 571/272-3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Robert W Wilson  
Examiner  
Art Unit 2661



**BOB PHUNKULH**  
**PRIMARY EXAMINER**

RWW  
10/18/05